

Extending the Reach of IGSN Beyond Earth: Implementing IGSN Registration to Link NASA's Apollo Lunar Samples and their Data

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The rock and soil samples returned from the Apollo missions from 1969-72 have supported 46 years of research leading to advances in our understanding of the formation and evolution of the inner Solar System. NASA has been engaged in several initiatives that aim to restore, digitize, and make available to the public existing published and unpublished research data for the Apollo samples. One of these initiatives is a collaboration with IEDA (Interdisciplinary Earth Data Alliance) to develop MoonDB, a lunar geochemical database modeled after PetDB. In support of this initiative, NASA has adopted the use of IGSN (International Geo Sample Number) to generate persistent, unique identifiers for lunar samples that scientists can use when publishing research data.

To facilitate the IGSN registration of the original 2,200 samples and over 120,000 subdivided samples, NASA has developed an application that retrieves sample metadata from the Lunar Curation Database and uses the SESAR API to automate the generation of IGSNs and registration of samples into SESAR (System for Earth Sample Registration). This presentation will describe the work done by NASA to map existing sample metadata to the IGSN metadata and integrate the IGSN registration process into the sample curation workflow, the lessons learned from this effort, and how this work can be extended in the future to help deal with the registration of large numbers of samples.